

REMARKS

The Office Action mailed May 21, 2003 has been received and the Examiner's comments carefully reviewed. The specification has been amended. No new subject matter has been added. Claims 1-12 are currently pending. Applicants respectfully submit that the pending claims are in condition for allowance.

Specification Objection

The Examiner objected to the drawings because the included reference signs 612, 570, and 654 not mentioned in the detailed description of the specification. The specification has been amended into include reference numbers 612, 570, and 654 corresponding to the drawings.

Rejections Under 35 U.S.C. §102

The Examiner rejected claims 10-12 under 35 U.S.C. §102(b) as being anticipated by Hansen et al. (U.S. Patent 5,988,299). Applicants respectfully traverse this rejection.

Hansen discloses a vertical drilling machine with a servicing system that includes a pair of tong assemblies for automatically disconnecting or connecting rods or tubes. See Abstract. The tong assemblies are configured to clamp onto and rotate rods to disconnect or connect the rod to a string. Column 6 lines 45-49.

Claim 10 recites a method for operating a drilling machine including a rod grip and a longitudinal driver. The method includes adjusting the available thrust provided by the longitudinal driver depending upon whether the rod grip is clamped or unclamped.

The system of Hansen does not disclose operation of a longitudinal driver in relation to the tong assemblies. Rather, the system of Hansen discloses a system controlling the torsional operation of the tong assemblies in making and breaking strings. In particular, Hansen discloses that the tong assemblies can be operated at high rotational speed, or can be operated to provide maximum torque at low rotational speed. The disclosure describes the relationship between torque and speed of the tongs, not a relationship between axial thrust of a longitudinal driver and the position or state of rod grips.

Because Hansen does not teach a method of operation including adjusting the longitudinal thrust in relation to whether rod grips are clamped or unclamped, Applicants respectfully submit that independent claim 10, and depend claims 11-12 are patentable.

Rejections Under 35 U.S.C. §103

The Examiner rejected claims 1-4 under 35 U.S.C. §103(a) as being unpatentable over Teller et al. (U.S. Patent 6,374,928) in view of Hansen et al. (U.S. Patent 5,988,299).

Claim 1 recites a drilling machine having a control station including first and second operator activated switches. The first switch initiates a rod transfer sequence that brings a rod transfer member to a retracted position. The second switch initiates a vice grip sequence that clamps the vice grip, and initiates a rod transfer sequence that brings the rod transfer member to an extended position.

The first and second switches are advantageous during disassembly of a string, i.e. during pull-back mode. In particular, an operator can activate the first switch to transfer a separated rod section of the drill string to a rod box. The operator can then activate a second switch that both 1) clamps a second rod section of the drill string for separation, and 2) moves the transfer member forward to retrieve the second separated rod section for transfer to the rod box. The configuration of the second switch improves operation efficiency by performing multiple operations simultaneously.

Neither Teller nor Hansen teach or suggest a control station having a switch that controls both initiation of a vice grip sequence and a rod transfer sequence as recited in claim 1. Applicants therefore respectfully submit that independent claim 1, and dependent claims 2-4 are patentable.

The Examiner also rejected claim 8 under 35 U.S.C. §103(a) as being unpatentable over Teller et al. (U.S. Patent 6,374,928) in view of Hansen et al. (U.S. Patent 5,988,299), and further in view of Shaginian et al. (U.S. Patent 4,604,724). Applicants respectfully traverse this rejection. Claim 8 depends upon claim 1. In view of the remarks regarding independent claim 1, however, further discussion regarding the independent patentability of dependent claim 8 is believed to be unnecessary. Applicants submit that dependent claim 8 is in condition for allowance.

Allowable Subject Matter

The Examiner objected to claims 5-7 and 9, but indicated that claims 5-7 and 9 would be allowable if rewritten in independent form incorporating all the limitations of the base claim and any intervening claims. Applicants thank the Examiner for this notification.

SUMMARY

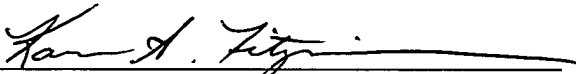
It is respectfully submitted that each of the presently pending claims (claims 1-12) is in condition for allowance and notification to that effect is requested. The Examiner is invited to contact Applicants' representative at the below-listed telephone number if it is believed that prosecution of this application may be assisted thereby.

Although certain arguments regarding patentability are set forth herein, there may be other arguments and reasons why the claimed invention is patentably distinct. Applicants reserve the right to raise these arguments in the future.

Respectfully submitted,

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